

CCAMLR-XXXI/**
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A PROPOSAL FOR THE ROSS SEA REGION MARINE PROTECTED AREA

Delegation of the United States

A PROPOSAL FOR THE ESTABLISHMENT OF THE ROSS SEA REGION MARINE PROTECTED AREA

Delegation of the United States

Abstract

1. The delegation of the United States proposes the establishment by the Commission for the Conservation of Antarctic Living Marine Resources (Commission or CCAMLR) of a marine protected area (MPA) in the Ross Sea Region (“Ross Sea Region Marine Protected Area”). In 2010, the Commission endorsed the Scientific Committee’s work program to develop a representative system of Antarctic MPAs with the aim of conserving marine biodiversity in the Convention Area. Consistent with this goal and to safeguard the exceptional ecological value and scientific importance of the Ross Sea Region for current and future generations, our delegation proposes to establish this MPA to conserve marine living resources, preserve ecological structure and function, protect vital ecosystem processes and areas of ecological significance, and maintain a reference area for scientific research and monitoring. This proposal is consistent with Conservation Measure 91-04 (2011) and the scientific conclusions and processes, endorsed by the Scientific Committee, from which the United States developed its original MPA scenario for the Ross Sea Region.

Background

2. Since 2005, the Commission has undertaken significant scientific analyses and planning toward the implementation of MPAs in the Convention Area. These efforts have progressed in accordance with the decision at the 2002 World Summit on Sustainable Development to achieve a representative network of MPAs by 2012. The Commission’s work to establish MPAs in the Convention Area is further supported in the recent decision of the 2012 United Nations Conference on Sustainable Development, which noted the importance of conserving, by 2020, 10 percent of coastal and marine areas, especially areas important for biodiversity and ecosystem services, through representative and well-connected systems of protected areas. The Commission recognizes MPAs for, among other attributes, their important role in facilitating research and monitoring of Antarctic marine living resources and as a tool for contributing to sustained ecosystem structure and function, maintaining the ability to adapt in the face of climate change¹.
3. To conserve the significant marine biodiversity of the Convention Area, in 2010 the Commission endorsed the Scientific Committee’s work program to develop a representative system of Antarctic MPAs. The Commission’s commitment to a system of MPAs further implements Article IX.2 (f) and 2(g) of the CAMLR Convention where the Commission may adopt conservation measures, formulated on the basis of the best scientific evidence available, designating open and closed seasons for harvesting and the opening and closing of areas, regions or sub-regions for the purposes of scientific study or conservation, including special areas for protection and scientific study. The

¹ CCAMLR Conservation Measure 91-04 (2011). General framework for the establishment of CCAMLR Marine Protected Areas.

Commission's first, and to date only, MPA was designated in 2009 in the South Orkney Islands region, and came into force in 2010. In 2011, to facilitate efforts to further develop its representative system of MPAs, the Commission adopted Conservation Measure 91-04 (2011), which provides a general framework for the establishment of CCAMLR MPAs, including overarching MPA objectives, key elements and limitations of MPA conservation measures, and requirements for management and research and monitoring plans.

4. Recognizing the remarkable ecological and scientific importance of the Ross Sea Region, the United States now proposes the establishment of the Ross Sea Region Marine Protected Area. The Ross Sea Region is among the best studied areas of high-latitude continental shelf ocean in the Southern hemisphere. The existing high level of scientific understanding and information about the Ross Sea Region make it a uniquely desirable candidate for protection. Such protection would safeguard this extremely valuable scientific reference area for research and monitoring, particularly as it relates to long-term climate and other environmental change. The existing long-term datasets on the region's geology, oceanography, climatology and biology provide a robust characterization of a region with tremendous ecological value, biological productivity and biodiversity. The Ross Sea continental shelf is known to encompass the most productive ecosystems of the Southern Ocean, generating abundant marine life, and it is one of the few places in the world that retains its full community of top-level predators. Indeed, for its unique scientific, biodiversity, and ecosystem values, the Ross Sea Region is among the most pristine natural regions in the world and of tremendous conservation and scientific value to current and future generations².
5. This MPA proposal is consistent with Conservation Measure 91-04 (2011), the MPA planning domains endorsed by the Commission in 2011, and the Commission's precautionary approach to management. The proposal further reflects the scientific conclusions and processes, endorsed by the Scientific Committee³, from which the United States developed its original MPA scenario for the Ross Sea Region. The Ross Sea Region Marine Protected Area proposal is based on a substantial body of interdisciplinary research, extensive consultations with scientists and stakeholders, and in-depth bilateral and multilateral discussions in various CCAMLR fora.
6. The proposed Ross Sea Region MPA encompasses key areas of the Ross Sea Region marine environment that both correspond and contribute to achieving the MPA's conservation and science objectives, which are:
 - a) to conserve ecological structure and function throughout the Ross Sea Region, at all levels of biological organization, by prohibiting fishing in habitats that are important to native mammals, birds, fishes, and invertebrates;
 - b) to provide a reference area, in which fishing is prohibited, to better gauge the ecosystem effects of climate change and fishing, and to provide other opportunities for better understanding the Antarctic marine ecosystem; and
 - c) to promote research and other scientific activities (including monitoring) focused on marine living resources.

² SC-CAMLR-XXX/09, SC-CAMLR-XXX/10, WG-EMM-11/30 and WS-MPA-11/25.

³ SC-CAMLR-XXX, paragraph 5.45.

7. The United States likewise recognizes many CCAMLR Members' interests in commercial fishing in the Ross Sea Region, and the utility of continuing toothfish tagging research to inform stock assessment. In designing the proposal, our delegation sought to maximize the achievement of objectives for scientific research, ecosystem protection, and marine living resource conservation, where conservation includes rational use. To this end, the MPA proposal leaves the vast majority of main toothfish fishing grounds in the Ross Sea Region open to fishing. The proposal further would further allow total allowable catch to be reallocated between existing management units (Small Scale Research Units), potentially displaced fishing effort to be redistributed with few anticipated impacts to fishing operations, and research fishing to be conducted within the MPA.
8. Our proposal further accommodates Members' interests in commercial fishing in the Ross Sea Region by including zones designed to achieve protection and scientific objectives while still allowing some fishing to occur in certain areas within the MPA. Specifically, our proposal comprises three zones – the North Central Zone, the Western Zone, and the Southern Zone – designed to respond to Members' comments on our initial MPA scenario for the Ross Sea Region presented in SC-CAMLR-XXX/9.
9. First, some Members recommended that we consider seasonal closures to achieve protection objectives for spawning toothfish associated with the seamounts north of about 65°S. In response to this suggestion our proposal includes the North Central Zone where directed fishing for toothfish is allowed subject to specific season and gear restrictions, the latter of which is intended to minimize risks to vulnerable benthic communities.
10. Second, to accommodate Members who may be interested in krill fishing, our proposal includes the Western Zone in which krill fishing would be permitted pursuant to Conservation Measure 51-04 (2011). The United States considers that such fishing would pose minimal risk to the ecosystem in the Western Zone and provide critical data for understanding the dynamics and role of krill in this area of the Ross Sea Region.
11. Finally, our proposal would establish the Southern Zone in which research fishing is the only type of fishing that would be permitted, and such fishing must be approved, in advance, by the Commission on a case-by-case basis if planned catches exceed thresholds established in Conservation Measure 24-01 (2011). The United States recognizes the importance of research fishing and considers that commercial fishing in this zone would undermine its ability to serve as a scientific reference area to support research aimed at understanding the ecosystem effects of climate change and fishing by contrasting ecosystem structure and function in the Southern Zone with that in fishing grounds outside the MPA.
12. It is our view that the proposed Ross Sea Region Marine Protected Area would mark a major achievement toward meeting the Commission's goal of developing a representative system of Antarctic MPAs with the aim of conserving marine biodiversity in the Convention Area.
13. The delegation of the United States invites all Members to consider the following Conservation Measure to establish the Ross Sea Region Marine Protected Area for the purpose of achieving the conservation of Antarctic marine living resources, where conservation includes rational use.

CONSERVATION MEASURE 91-XX (2012)

Protection of the Ross Sea Region

Species all

Area 88.1 and 88.2

Season all commencing in 2013/14

Gear various

The Commission,

Acknowledging the decision at the World Summit on Sustainable Development in 2002 to achieve a representative system of Marine Protected Areas (MPAs) by 2012;

Acknowledging also the decision at the 2012 United Nations Conference on Sustainable Development noting the importance of conserving by 2020, 10 percent of coastal and marine areas, especially areas important for biodiversity and ecosystem services, through representative and well-connected systems of protected areas;

Recalling its endorsement of the work program of the Scientific Committee to develop a representative system of MPAs in the Convention Area (CCAMLR MPAs) with the aim of conserving marine biodiversity;

Conscious of the important leadership role that CCAMLR plays internationally in the conservation of marine biodiversity, including through the on-going development of a representative system of CCAMLR MPAs;

Noting the designation of a general framework for the establishment of CCAMLR MPAs as an important contribution toward achieving a representative system of CCAMLR MPAs;

Anticipating that establishment of CCAMLR MPAs will benefit from the exchange of information between CCAMLR and the Antarctic Treaty Consultative Meeting;

Desiring to implement Articles IX.1(f) and 2(g) of the CAMLR Convention, which provide that conservation measures, formulated on the basis of the best scientific evidence available, may designate the opening and closing of areas, regions or sub-regions for purposes of scientific study or conservation, including special areas for protection and scientific study;

Recognizing that establishment of CCAMLR MPAs can provide unparalleled opportunities to understand the ecosystem impacts of climate change separate from those of fishing;

Noting the identification of the Ross Sea Region as a priority area for conserving marine biodiversity;

Recognizing also that the Ross Sea Region contains features of exceptional ecological value and scientific importance and that the Ross Sea Shelf is the most productive area of the Southern Ocean and one of the few places in the world that still has its full community of top-level predators;

Recognizing furthermore that the Ross Sea Region is among the best studied areas of high-latitude, continental shelf ocean in the Southern Hemisphere, with unique time-series datasets describing the region's geological, oceanographic, climatic, and ecological history, which offer a rich context for the study of climate change effects in the region;

Recognizing also that the establishment of zones within MPAs provides a mechanism to achieve protection and scientific objectives while still allowing some fishing to occur in specific areas within MPAs

hereby adopts the following in accordance with Articles II and IX of the Convention to establish an MPA in the Ross Sea Region:

1. The area defined in Annex 91-XX/A is designated as the Ross Sea Region Marine Protected Area (the MPA) pursuant to Conservation Measure 91-04. The provisions of Conservation Measure 91-04 apply to this MPA.
2. The MPA shall be divided into three zones that are also defined in Annex 91-XX/A:
 - (i) the Southern Zone,
 - (ii) the Western Zone, and
 - (iii) the North Central Zone.
3. The MPA is designated to contribute to three specific objectives:
 - (i) to conserve ecological structure and function throughout the Ross Sea Region, at all levels of biological organization, by prohibiting fishing in habitats that are important to native mammals, birds, fishes, and invertebrates;
 - (ii) to provide a reference area, in which fishing is prohibited, to better gauge the ecosystem effects of climate change and fishing, and to provide other opportunities for better understanding the Antarctic marine ecosystem; and
 - (iii) to promote research and other scientific activities (including monitoring) focused on marine living resources.

Prohibited and Restricted Activities throughout the Entire MPA

4. Members are prohibited from conducting scientific research activities, for monitoring or other purposes, that are not in accordance with Conservation Measure 24-01. However, Members are encouraged to conduct research activities consistent with Annex 91-XX/C. Members are further prohibited from conducting research activities for which catches may exceed the amounts specified in Annex 24-01/B unless the specific activities to be undertaken are approved, in advance, by the Commission.

5. Fishing vessels and vessels conducting scientific research activities on Antarctic marine living resources should avoid dumping or discharging wastes or other matter within the MPA. At a minimum, the provisions of Conservation Measure 26-01 shall apply within the MPA.

Prohibited and Restricted Activities in the Southern Zone

6. Except as authorized under paragraph 4, all fishing activities are prohibited within the Southern Zone.
7. Notwithstanding Conservation Measure 10-09, fishing vessels are prohibited from engaging in transhipment⁴ activities within the Southern Zone.

Prohibited and Restricted Activities in the Western Zone

8. Except as authorized under paragraph 4, directed fishing for finfishes, squids, and crabs is prohibited within the Western Zone.
9. Except as authorized under paragraph 4, directed fishing for krill within the Western Zone shall be conducted in accordance with Conservation Measure 51-04.

Prohibited and Restricted Activities in the North Central Zone

10. Except as authorized under paragraphs 4 and 11, all fishing activities are prohibited within the North Central Zone.
11. Notwithstanding Conservation Measure 41-09, directed fishing for *Dissostichus spp.* is prohibited within the North Central Zone except during the period from 1 December to 31 March when:
 - (i) directed fishing for *Dissostichus spp.* in the North Central Zone shall be limited to the use of Spanish longline systems like those referenced in Conservation Measures 25-02.
 - (ii) the total catch of *Dissostichus spp.* taken in the North Central Zone shall be considered as part of the catch limit established for SSRUs 88.1B, C, and G in Conservation Measure 41-09.

Management and Administrative Arrangements

12. The management measures and administrative arrangements for achieving the objectives of the MPA are specified in the MPA Management Plan (Annex 91-XX/B).
13. The Commission, with due consideration of advice by the Scientific Committee may, at any time, amend this Conservation Measure and its Annexes.

⁴ Transhipment means the transfer of harvested marine living resources and any other goods or materials to or from fishing vessels.

14. Unless otherwise agreed by the Commission upon advice by the Scientific Committee, the Commission shall review this Conservation Measure at least every ten years to evaluate whether the objectives of the MPA are still relevant or being achieved, taking into account the reports submitted pursuant to paragraph 18.
15. CCAMLR Contracting Parties shall provide a copy of this Conservation Measure to all vessels licensed to fish in the CAMLR Convention Area.

Compliance and monitoring:

16. Members participating in the CCAMLR System of Inspection are encouraged to carry out surveillance and inspection activities within the MPA to verify compliance with this Conservation Measure and other applicable Conservation Measures.
17. For the purpose of monitoring traffic within the MPA, in accordance with Conservation Measure 10-04, Flag States must notify the Secretariat prior to entry of their fishing vessels into the MPA. The Flag State may permit or direct that such notifications be provided by the vessel directly to the Secretariat. Vessels conducting scientific research activities on Antarctic marine living resources in or transiting the area are encouraged to inform the Secretariat of their plans for intended passage through the MPA. Such notification should include their Flag State, size, and IMO number.

Research and Monitoring Plan

18. Priority elements for scientific research and monitoring associated with this MPA are identified in Annex 91-XX/C. Based on these priority elements, a Research and Monitoring Plan shall be introduced to the Commission in 2013.
19. Unless otherwise agreed by the Commission, Members shall submit to the Secretariat, for review by the Scientific Committee, a report on their activities conducted according to or related to the MPA Research and Monitoring Plan, including any preliminary results. These reports shall be submitted to and compiled by the Secretariat in 2018 and every 5 years thereafter. The Secretariat shall provide the reports to the Scientific Committee no later than 6 months prior to the 2023 Commission Meeting and every 10 years thereafter.

Cooperation with other States and Organizations

20. The Commission shall draw this Conservation Measure to the attention of any State that is not a Party to the Convention, whose nationals or vessels operate in the Convention Area.
21. The Commission shall communicate information about the MPA to the Antarctic Treaty Consultative Meeting, and shall encourage the Antarctic Treaty Consultative Meeting to take appropriate actions within its competence to contribute to the achievement of the objectives set forth in paragraph 2, particularly with regard to the designation and implementation of Antarctic Specially Protected Areas

and Antarctic Specially Managed Areas in the Ross Sea Region; and the management of human activities, including tourism activities.

22. Members are encouraged to work together to actively engage:

- (i) the International Maritime Organization with regard to ship traffic, vessel safety, and environmental protection issues, and
- (ii) other international organizations,

to take complementary actions within their competence to contribute to the achievement of the objectives set forth in paragraph 2.

**ROSS SEA REGION MARINE PROTECTED AREA BOUNDARIES AND MAP, INCLUDING
DEFINITIONS OF ZONES WITHIN THE MPA**

1. The Ross Sea Region Marine Protected Area is bounded by a line starting where the meridian at 157°E intersects the coastline, thence due north to 65°S, thence due east to 160°E, thence due north to 60°S, thence due east to 173°45'E, thence due south to 62°50'S, thence due east to 175°W, thence due south to 66°7'S, thence due west to 173°45'E, thence due south to 73°30'S, thence due east to 150°W, thence due south to the coastline, and thence along the coastline to the starting point (Figure 1).
2. The Southern Zone is bounded by a line starting where the 70°S parallel intersects the coastline, thence due east to 173°45'E, thence due south to 73°30'S, thence due east to 150°W, thence due south to the coastline, and thence along the coastline to the starting point (Figure 1).
3. The Western Zone is bounded by a line starting where the meridian at 157°E intersects the coastline, thence due north to 65°S, thence due east to 160°E, thence due north to 60°S, thence due east to 173°45'E, thence due south to 70°S, thence due west to the coastline, and thence along the coastline to the starting point (Figure 1).
4. The North Central Zone is bounded by a line starting at 66°7'S 173°45'E, thence due north to 62°50'S, thence due east to 175°W, thence due south to 66°7'S, and thence due west to the starting point (Figure 1).

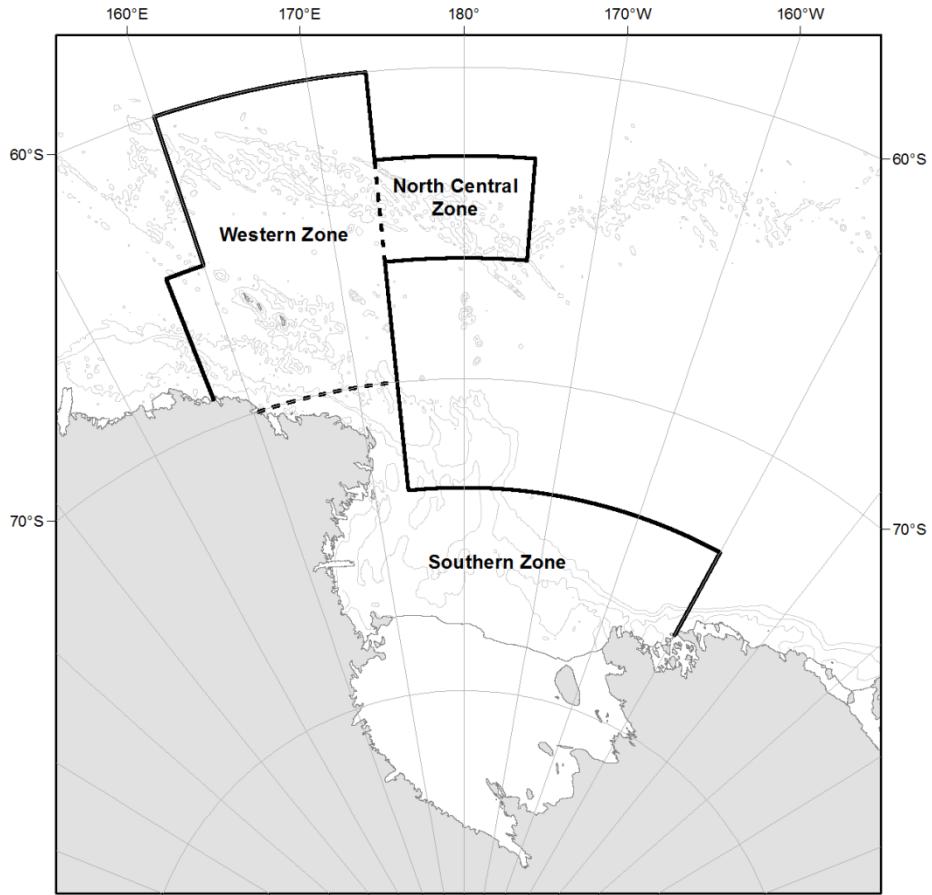


Figure 1: The boundaries of the Ross Sea Region Marine Protected Area (solid bold line and coastline from 157°E to 150°W) and the three zones within the MPA (separated by dashed bold lines). Depth contours are at 500 m, 1500 m, and 2500 m.

ROSS SEA REGION MARINE PROTECTED AREA MANAGEMENT PLAN

This management plan provides further details about the objectives for the MPA, and management measures and administrative arrangements for achieving the objectives of the MPA.

1. Specific objectives (with citations for additional information) are:

- (i) to conserve ecological structure and function throughout the Ross Sea Region, at all levels of biological organization, by prohibiting fishing in habitats that are important to native mammals, birds, fishes, and invertebrates (e.g., the habitats illustrated in SC-CAMLR-XXX/9 Figure 1);
- (ii) to provide a reference area in which fishing is prohibited, to better gauge the ecosystem effects of climate change and fishing, and to provide other opportunities for better understanding the Antarctic marine ecosystem (e.g., by developing contrasts similar to that illustrated in SC-CAMLR-XXX/9 Figure 2); and
- (iii) to promote research and other scientific activities (including monitoring) focused on marine living resources (e.g., by providing Annex 91-XX/C as a guidance document that scientists can leverage within their domestic funding processes).

Management and Administrative Arrangements

2. Responsibilities of the Commission include the following:

- (i) consider advice from SC-CAMLR and SCIC relevant to reviews of the Conservation Measure establishing the MPA;
- (ii) ensure that future Conservation Measures do not compromise the objectives of the MPA, as set forth in paragraph 2 of this Conservation Measure;
- (iii) communicate with other organizations to promote consistency of initiatives, protections, or activities being pursued or managed by such organizations, with this Conservation Measure, as appropriate; and
- (iv) approve scientific research activity to be conducted in the MPA as required in paragraph 4 of this Conservation Measure.

3. Responsibilities of the Scientific Committee include the following:

- (i) pursuant to paragraph 4 of this Conservation Measure, review and provide advice to the Commission regarding proposals for research in the Convention Area, noting whether the proposed research is consistent with Annex 91-XX/C and the objectives of the MPA as identified in paragraph 2 of the Conservation Measure; and

(ii) pursuant to paragraph 18 of this Conservation Measure, review reports of research activities that have been undertaken, and advise the Commission on issues identified in Annex 91-XX/C paragraph 2.

4. Responsibilities of the Secretariat include the following:

- (i) warehouse and manage information and data that are pertinent to the development, management, and review of the MPA (e.g., data collected during research surveys);
- (ii) support monitoring of activities within the MPA; and
- (iii) provide URLs on the Secretariat website that link to the management plans, maps, and coordinates for Antarctic Specially Protected Areas and Antarctic Specially Managed Areas within or adjacent to the MPA.

5. Responsibilities of Members include the following:

- (i) when possible, participate in and cooperate to conduct research and monitoring consistent with activities outlined in the Research and Monitoring Plan; and
- (ii) submit reports to the Secretariat on their research activities pursuant to paragraph 18 of this Conservation Measure.

PRIORITY ELEMENTS FOR SCIENTIFIC RESEARCH AND MONITORING IN SUPPORT OF THE ROSS SEA REGION MARINE PROTECTED AREA

This Annex identifies priority elements for scientific research pursuant to and in support of the objectives of the Ross Sea Region Marine Protected Area, and for monitoring the achievement of those objectives. Other research that is consistent with the objectives of the MPA but not explicitly outlined here is encouraged, pursuant to paragraph 4 of this Conservation Measure.

1. Research and monitoring associated with the MPA should be designed to address one or more of the following questions:
 - (i) Do the boundaries of the MPA continue to encompass the populations or subpopulations, areas, or features that were originally included within the MPA?
 - (ii) What are the ecosystem roles of the populations or subpopulations, areas, or features that were originally included within the MPA, and are these roles impacted by climate change, fishing, or other activities or processes?
 - (iii) Do the structure and function of the marine ecosystem differ between areas inside the MPA and areas outside the MPA, or do the populations or subpopulations of marine organisms that occur or forage inside the MPA differ from those that occur or forage outside the MPA?
2. The Scientific Committee will evaluate the results of research and monitoring activities and advise the Commission on:
 - (i) whether the specific objectives identified in this Conservation Measure are being achieved, and
 - (ii) whether additional conservation measures (e.g., adjusting boundaries of the MPA) would further the achievement of these objectives.
3. Research and monitoring should be stratified geographically and focus on the:
 - (i) seamounts north of 70°S,
 - (ii) area surrounding the Balleny Islands,
 - (iii) continental slope, and
 - (iv) continental shelf.

4. Priority research and monitoring activities are identified in Table 1. Members are encouraged to, as far as possible, collaborate and repeat the types of activities identified in Table 1 so that variability and trends may be characterized over time.

Table 1. Priorities for scientific research and monitoring in support of the Ross Sea Region Marine Protected Area.

Priority activity	Geographic focus	Purpose
surveys (from research vessels, fishing vessels, and other platforms, e.g., satellites) to estimate the distribution and abundance of <ul style="list-style-type: none"> • killer whales • other toothed whales • baleen whales • Weddell seals • other ice seals • toothfish • skates and grenadiers • other demersal fishes • silverfish • krill • squids • benthic invertebrates including comparisons inside and outside the MPA and studies of recovery or recolonization in previously fished locations	→ shelf and slope → slope and seamounts → slope and Balleny Islands → shelf and slope → shelf and slope → all → slope → shelf and slope → shelf and slope → slope and Balleny Islands → slope and seamounts → slope and seamounts	to characterize the structure of the marine ecosystem, including spatial variation in structure and potential differences between fished and unfished areas
monitoring and research on <ul style="list-style-type: none"> • Weddell seals • Adélie penguins • Emperor penguins • other seabirds includes studies of reproductive biology and success as well as diets and foraging dynamics	shelf and slope	<ul style="list-style-type: none"> • to link changes in predator reproductive success, condition, etc. with the location of foraging and quality, quantity, and composition of prey • to characterize the demography and dynamics of key prey species from the diets of predators
meteorological and oceanographic research to characterize properties and dynamics of <ul style="list-style-type: none"> • solar radiation • winds • water masses • sea ice • phytoplankton • other plankton 	all	to characterize the physical and biological template that is established by environmental variability and climate change, providing context for interpreting other changes that may be observed in the ecosystem
directed studies (e.g., tracking and tagging, diets, egg and larval surveys) to address basic biological and ecological questions related to animal and plant demographies and life histories	all, but may vary for each specific study	to resolve key uncertainties surrounding life histories and functional roles in the marine ecosystem